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EXAMINER

LERNER, MARTIN

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/046,131	<b>Applicant(s)</b> GALANES ET AL.	
	<b>Examiner</b> MARTIN LERNER	<b>Art Unit</b> 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 to 56 is/are pending in the application.
- 4a) Of the above claim(s) 53 to 56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 to 52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicants' election without traverse of Group II, Claims 23 to 51, in the reply filed on 13 June 2008 is acknowledged.

Claims 53 to 56 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 13 June 2008.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 to 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Independent claims 1 and 12 contain the terms "modality dependent attributes" and "modality dependent controls", which are new matter because Applicants' Specification as originally-filed does not provide an adequate written description in such a way as to reasonably convey that the inventors had possession of the concept of

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modality dependence. The Specification does not set forth the term "modality dependent", and the only disclosure of the term is from *Dantzig et al.*, the prior art from which Applicants are attempting to distinguish.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 to 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitations of independent claims 1 and 12 that attributes are "directly related" to recognition and audibly prompting, modality dependent attributes being provided "directly" from the controls on the authoring page, and the client side markup is generated "directly" from modality dependent controls are vague and indefinite. It is appreciated that Applicants are attempting to distinguish by inclusion of the term "directly related" over the modality independent script of *Dantzig et al.* However, Applicants' Specification does not expressly disclose anything about the attributes being "directly related" to the visual rendering or using modality dependent attributes provided "directly" from the controls on an authoring page, nor would it be immediately clear to one having ordinary skill in the art that the attributes are "directly related" in any sense not necessarily disclosed by *Dantzig et al.* The limitation "directly related" is vague, and may be misdescriptive.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 to 2 and 4 to 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Dantzig et al.* in view of *Coffman et al.*

Concerning independent claim 1, *Dantzig et al.* discloses a system and method for generating multi-modal applications from markup scripts, comprising:

“a set of controls defined in an authoring page for a website for defining desired visual renderings and at least one of recognition and audible prompting on a client in a client/server system, each control having a first set of attributes directly related to visual rendering and a second set of attributes directly related to at least one of recognition and audibly prompting, the controls being related to client side markup executable by a client browser” – an XML (eXtensible Markup Language) script is implemented in a single authoring format (“an authoring page”) (column 5, lines 50 to 56); main renderer 14 of a multi-modal presentation manager 11 initiates a first processing thread comprising a GUI presentation manager 15 (“a first set of attributes directly related to visual rendering”) (column 7, lines 38 to 43: Figure 1); presentation of a graphic user interface (GUI) for an application defines a “visual rendering”; main renderer 14 of a multi-modal presentation manager 11 initiates a second processing thread comprising a speech renderer 16 (“a second set of attributes directly related to at least one of

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recognition and audibly prompting”), wherein the speech renderer 16 utilizes a plurality of speech engines 17 for speech recognition and text-to-speech synthesis (column 7, lines 38 to 47: Figure 1); controls are “modality dependent” because each processing thread is directed to either a modality relating to GUI presentation or a modality relating to a speech renderer; multi-modal presentation manager 11 controls an application on a web browser or a desktop (column 8, lines 32 to 35: Figure 1); one thread comprising a GUI presentation manager 15 is “directly related” to defining desired visual renderings on the client device because the thread immediately initiates a visual modality; similarly, a second thread comprising a speech renderer 16 is “directly related” to defining desired operation on the client device because the thread immediately initiates speech recognition or text-to-speech synthesis;

“a module operable on a computer, the module being configured to receive the authoring page, and wherein the module is further configured to generate, using modality dependent attributes provided directly from controls on the authoring page, client side markup executable by the client browser on the client in the server/client system in accordance with the controls and the attributes of the controls to perform both visual rendering and at least one of recognition and audibly prompting” – multi-modal presentation manager 11 controls an application on a web browser or a desktop (column 8, lines 32 to 35: Figure 1); implicitly, a web browser is executed on a client in a client/server architecture for receiving information from the Internet; a “single-authoring” system and method is an interaction-based programming paradigm for creating content as an intent-based markup script (column 5, line 20 to column 6, line 2; column 10, lines

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24 to 28); thus, authoring for web-based presentation is on “an authoring page” at a client browser; main renderer 14 of a multi-modal presentation manager 11 initiates a first processing thread comprising a GUI presentation manager 15 (“a first set of attributes directly related to visual rendering”) (column 7, lines 38 to 43: Figure 1); presentation of a graphic user interface (GUI) for an application defines a “visual rendering”; main renderer 14 of a multi-modal presentation manager 11 initiates a second processing thread comprising a speech renderer 16 (“a second set of attributes directly related to at least one of recognition and audibly prompting”), wherein the speech renderer 16 utilizes a plurality of speech engines 17 for speech recognition and text-to-speech synthesis (column 7, lines 38 to 47: Figure 1).

Concerning independent claim 1, the only elements arguably omitted by *Dantzig et al.* are that the attributes are “modality dependent” and controls have attributes that are “directly related” to visual rendering, recognition, and audibly prompting. *Dantzig et al.* discloses that one thread comprising a GUI presentation manager and a second thread comprising a speech renderer are generated from components of modality-independent IML input files rather than directly generating the visual rendering, recognition, and audible prompting. Still, *Coffman et al.* teaches a system and method for providing dialog management in a multi-modal environment, where an input/output (I/O) application program interface (API) 18 provides device abstractions and modality-dependent presentation based on an I/O modality or modalities being utilized. (Column 5, Line 59 to Column 6, Line 3: Figure 2) Multi-modal interaction dialog comprises modalities including speech (e.g., authored in VoiceXML) and visual (GUI) (e.g.,

hypertext markup language). (Column 4, Lines 17 to 23) Thus, attributes from VoiceXML and HTML are "directly related" to recognition and visual renderings. An objective is to provide seamless, multi-modal access across a plurality of conversational applications and frameworks. (Column 1, Lines 49 to 60) It would have been obvious to one having ordinary skill in the art to provide modality-dependent attributes and controls directly related to visual rendering and recognition as taught by *Coffman et al.* in a system and method for generating and presenting multi-modal applications of *Dantzig et al.* for a purpose of providing seamless, multi-modal access across a plurality of conversational applications.

Concerning claims 2 and 4, *Dantzig et al.* discloses that controls relate to grammars for speech recognition (column 9, lines 31 to 39; column 16, lines 6 to 30).

Concerning claims 5 and 6, *Dantzig et al.* discloses that controls relate to XML (column 5, lines 50 to 56), VoiceXML (a form of XML) (Abstract), and WML (column 6, lines 56 to 62).

Concerning claims 7 and 8, *Dantzig et al.* discloses a speech renderer 16 generates audible output by text-to-speech synthesis (column 7, lines 42 to 45).

Claims 3 and 9 to 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Dantzig et al.* in view of *Coffman et al.* as applied to claims 1 and 2 above, and further in view of *Ladd et al.* ('336).

Concerning claim 3, *Dantzig et al.* omits attributes for grammars and retrieving grammars from database locations. However, *Ladd et al.* ('336) teaches attributes for



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grammars (column 13, lines 6 to 10), and retrieving grammars from database locations (column 12, lines 7 to 14; column 14, lines 18 to 28) for speech recognition. *Ladd et al.* ('336) discloses a voice browser for interactive services, where a GRAMMAR input includes a SCR attribute that can be a grammar address (*i.e.*, a URL) for a markup language document: SCR = "gram//.SomeGrammar/month/year" ("location of a grammar for use in recognition"). (Column 20, Line 47 to Column 21, Line 1) An objective is permit users to access information from any location in the world via any suitable network access device. (Column 43, Lines 54 to 63) It would have been obvious to one having ordinary skill in the art to include markup attributes relating to a location of a grammar as taught by *Ladd et al.* ('336) in a system and method for generating and presenting multi-modal applications from markup scripts of *Dantzig et al.* for a purpose of permitting users to access information from any location in the world via a suitable network access device.

Concerning claims 9 to 11, *Ladd et al.* ('336) discloses determining an address for playing a prompt to a user (column 13, line 66 to column 14, line 17: Figure 5a: Steps 400, 402, 406); both recorded sound samples (column 15, line 63) and text to speech (TTS) (column 16, lines 11 to 20) are provided.

Claims 12 to 46 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Dantzig et al.* in view of *Ladd et al.* ('336).

Concerning independent claims 12, 23, and 52, *Dantzig et al.* discloses a system and method for generating multi-modal applications from markup scripts, comprising:

“a first set of visual controls having attributes on an authoring page for a website having attributes related to a first modality of interaction with a user of the client being visual renderings on the client device, the first set of controls being related to client side markup executable by a client browser” – main renderer 14 of a multi-modal presentation manager 11 initiates a first processing thread comprising a GUI presentation manager 15; an XML (eXtensible Markup Language) script is implemented in a single authoring format (“on an authoring page for a website”) (column 5, lines 50 to 56); presentation of a graphic user interface (GUI) for an application defines “visual renderings”; multi-modal presentation manager 11 controls an application on a web browser or a desktop (column 8, lines 32 to 35: Figure 1); implicitly, a web browser is executed on a client in a client/server architecture for receiving information from the Internet;

“a second set of controls defined on the authoring page for defining desired operation on the client device having attributes related to a second modality of interaction with a user of the client that being at least one of recognition and audible prompting, . . . the second set of controls being selectively associated with the first set of controls, and the second set of controls being related to client side markup executable a client browser” – main renderer 14 of a multi-modal presentation manager 11 initiates a second processing thread comprising a speech renderer 16, wherein the speech renderer 16 utilizes a plurality of speech engines 17 for speech recognition and

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text-to-speech synthesis (column 7, lines 38 to 47: Figure 1); an XML (eXtensible Markup Language) script is implemented in a single authoring format (“defined on an authoring page”) (column 5, lines 50 to 56); multi-modal presentation manager 11 controls an application on a web browser or a desktop (column 8, lines 32 to 35: Figure 1); implicitly, a web browser is executed on a client in a client/server architecture for receiving information from the Internet; in deferred rendering and presentation, a speech renderer 16 (“a second set of controls”) is “selectively associated with” GUI presentation manager 15 (“a first set of controls”) because multi-modal presentation manager 11 automatically integrates and synchronizes voice synthesis and speech recognition functions with the presentation layer of applications (column 6, line 63 to column 7, line 8: Figure 1);

“a module operable on a computer, the module being configured to receive the authoring page, wherein the module is further configured to process the controls of the first set in the authoring page to generate client side markup for the first modality of interaction by incorporating the attributes in the controls that is executable by the client browser on the client in the server/client system in accordance with the controls of the first set and the attributes of the controls of the first set to perform both visual rendering, and wherein the module is configured to process the controls of the second set to generate client side markup for the second modality of interaction by incorporating the attributes in the controls that is executable by the client browser on the client in the client/server system in accordance with the controls of the second set and the attributes of the controls of the second set in the authoring page to perform at least one of

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recognition and audibly prompting” – main renderer 14 of a multi-modal presentation manager 11 initiates a second processing thread comprising a speech renderer 16, wherein the speech renderer 16 utilizes a plurality of speech engines 17 for speech recognition and text-to-speech synthesis (column 7, lines 38 to 47: Figure 1); an XML (eXtensible Markup Language) script is implemented in a single authoring format (“the authoring page”) (column 5, lines 50 to 56); authoring produces content for both GUI presentation manager 15 and speech renderer 16 (column 7, lines 38 to 48).

Concerning independent claims 12, 23, and 52, *Dantzig et al.* discloses grammars in VoiceXML in order to optimize speech recognition functions (column 10, lines 38 to 56), but omits the limitations of “wherein attributes related to recognition include at least one of location of grammar for use in recognition and confidence level thresholds for recognition and wherein attributes related to audible prompting include at least one of inline text for text-to-speech conversion, location of data for audible rendering and playing of a prerecorded audio file”. However, *Ladd et al.* (‘336) teaches a voice browser for interactive services, where a GRAMMAR input includes a SCR attribute that can be a grammar address (*i.e.*, a URL) for a markup language document: SCR = “gram//.SomeGrammar/month/year” (“location of a grammar for use in recognition”). (Column 20, Line 47 to Column 21, Line 1) Moreover, *Ladd et al.* (‘336) provides a voice browser, where a PROMPT element of the markup language is used to define content by <PROMPT> text </PROMPT> that is read by a text-to-speech unit, so that markup of <PROMPT> Please select a soft drink. </PROMPT> includes at least “inline text for text-to-speech conversion”. (Column 16, Line 63 to Column 17, Line 21;

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Column 18, Lines 33 to 39) An objective is permit users to access information from any location in the world via any suitable network access device. (Column 43, Lines 54 to 63) It would have been obvious to one having ordinary skill in the art to include markup attributes relating to a location of a grammar and inline text for text-to-speech conversion as taught by *Ladd et al.* ('336) in a system and method for generating and presenting multi-modal applications from markup scripts of *Dantzig et al.* for a purpose of permitting users to access information from any location in the world via a suitable network access device.

Concerning claims 14 and 25, *Ladd et al.* ('336) discloses attributes for grammars (column 13, lines 6 to 10), and retrieving grammars from database locations (column 12, lines 7 to 14; column 14, lines 18 to 28) for speech recognition.

Concerning claims 20 to 22 and 31 to 33, *Ladd et al.* ('336) discloses determining an address for playing a prompt to a user (column 13, line 66 to column 14, line 17: Figure 5a: Steps 400, 402, 406); both recorded sound samples (column 15, line 63) and text to speech (TTS) (column 16, lines 11 to 20) are provided.

Concerning claims 13, 15, 24, and 26, *Dantzig et al.* discloses controls relate to grammars for speech recognition (column 9, lines 31 to 39; column 16, lines 6 to 30).

Concerning claims 16 to 17, and 27 to 28, *Dantzig et al.* discloses controls relating to XML (column 5, lines 50 to 56), VoiceXML (a form of XML) (Abstract), and WML (column 6, lines 56 to 62).

Concerning claims 18 to 19, and 29 to 30, *Dantzig et al.* discloses a speech renderer 16 generates audible output by text-to-speech synthesis (column 7, lines 42 to 45).

Concerning claims 34 to 46, *Dantzig et al.* discloses a system and method for generating and presenting multi-modal applications from markup scripts for synchronizing a GUI presentation layer with voice synthesis and speech recognition, but omits details relating to “attributes providing a reference to a location”, “a prerecorded audio data file”, “an identifier of the associated control”, “a question control”, “an answer control”, “binding the recognition value”, and “a confirmation control”. However, *Ladd et al.* (‘336) teaches a voice browser for interactive services. An objective is permit users to access information from any location in the world via any suitable network access device. (Column 43, Lines 54 to 63) It would have been obvious to one having ordinary skill in the art to include details disclosed by *Ladd et al.* (‘336) in a system and method for generating and presenting multi-modal applications from markup scripts of *Dantzig et al.* for a purpose of permitting users to access information from any location in the world via a suitable network access device.

Concerning claim 34, *Ladd et al.* (‘336) discloses a markup language for text to speech; implicitly, when the text is displayed and the speech is produced for an audible prompt, there is an association of attributes between visual controls and audible controls.

Concerning claims 35 to 37, *Ladd et al.* ('336) discloses an option list in a markup language for controlling which choices are available at a network access apparatus (column 28, lines 9 to 60).

Concerning claim 38, *Ladd et al.* ('336) discloses a FORM input to collect an order in response to a prompt, and post the input to an address (column 20, lines 20 to 46); thus, a markup language controls a prompt, then activates an input, and then performs a post operation.

Concerning claims 39 to 43, *Ladd et al.* ('336) discloses a markup language for generating an audible prompt of a question and a grammar for an answer; an answer is followed by, and is activated, a question prompt, where an answer is bound for recognition by <INPUT TYPE> (column 18, lines 40 to 55); a post operation is "an event related to operation of binding" (column 20, lines 28 to 46).

Concerning claims 44 to 46, *Ladd et al.* ('336) discloses a markup language for re-prompting ("repeating an audible prompt") (column 14, line 57 to column 15, line 16: Figure 5a: Steps 416, 425), and an attribute for confirming a recognition result (column 15, lines 45 to 54: Figure 5a: Step 452).

Claims 47 to 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Dantzig et al.* in view of *Ladd et al.* ('336) as applied to claims 23, 39, 40, 45, and 46 above, and further in view of *WCW Working Draft* ("*Grammar Representation Requirements for Voice Markup Languages*").

*Ladd et al.* ('336) discloses a confirmation control to accept an answer as a recognized result that is correct (column 15, lines 44 to 59: Figure 5b: Step 456). Lack of confirmation implicitly denies a recognized result, whereupon the process continues to replay a prompt for a current step so as to correct a recognition result. (Figures 5a and 5b: Step 446) However, *Ladd et al.* ('336) omits an attribute related to a confidence level for confirming, accepting or denying, and correcting a recognition result. *WCW Working Draft* teaches grammars for voice markup languages with attributes, where confidence scoring tightens or relaxes the normal rejection constraints to provide content based control of performance. (Sections 4.3 and 5.1) It would have been obvious to one having ordinary skill in the art to provide confidence scoring as taught by *WCW Working Draft* in the voice browser for interactive services of *Ladd et al.* ('336) for a purpose of tightening or relaxing rejection constraints to provide content based control of performance.

### ***Response to Arguments***

Applicants' arguments filed 02 February 2009 have been fully considered but they are not persuasive.

Firstly, Applicants argue that they have deleted the term "modality dependent controls", but have retained the term "modality dependent attributes" for independent claim 1, and have removed the language directed to "modality dependent" from independent claims 23 and 52. Applicants say that Page 28, Line 29 to Page 29, Line 22, make it clear that there are attributes related to visual renderings and other



attributes related to recognition and audible prompting supporting the modality dependent language of independent claim 1. Furthermore, Applicants maintain that independent claim 12 covers the embodiment described by the Specification at Page 31, Line 24 to Page 32, Line 29, and that the term modality dependent attributes is clearly supported by the Specification.

However, the Specification was reviewed, but does not clearly support the "modality dependent" attributes and controls of independent claims 1 and 12, as contended by Applicants. The Specification may disclose that there is more than one way of interacting, but does not expressly disclose that the attributes are "modality dependent". Applicants' Specification does not even employ the term "modality" to describe the various ways of interacting. The only disclosure of the term "modality dependent" is from the prior art, *Dantzig et al.*

Secondly, Applicants argue that the terms "directly related" and "directly" are definite under 35 U.S.C. §112, 2<sup>nd</sup> ¶. Applicants state that there is a "direct" relationship between the attributes of the control, to what is incorporated in the client side markup, and what is then rendered to the user. Applicants note that the "directly related" language is deleted from independent claims 23 and 52.

The terms "directly related" and "directly" are indefinite within the context of the claims because Applicants are attempting to predicate patentability on a limitation that is not well defined by the Specification. Applicants' Specification does not disclose anything that can be construed as a definition of "directly related" so as to distinguish how that term is being used by Applicants. Applicants wish to distinguish that their

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relationship between attributes is more directly related to performing recognition, audible prompting, and visual rendering than *Dantzig et al.* However, Applicants' Specification does not disclose the term "directly related" so as to describe how their relationship differs from that of *Dantzig et al.* Clearly, there are inherently a number of intermediate steps between executing of computer code and the operations of recognition, audible prompting, and visual rendering. Thus, the speech must be recognized or synthesized by any number of intermediate acts of electrical processing, and visual output must be provided on a display screen through any number of intermediate steps relating to the generation and translation of an electrical signal into a visual display. Which intermediate steps are to be excluded by and which intermediate steps are included in the concept of "directly related" is what makes the language indefinite.

Thirdly, Applicants argue that *Dantzig et al.* discloses IML input files that are modality independent, while independent claim 1 sets forth modality dependent attributes.

New grounds of rejection are presented for claims 1 to 11 under 35 U.S.C. §103(a) over *Dantzig et al.* in view of *Coffman et al.*, rendering these arguments moot. *Coffman et al.* teaches modality dependent presentation.

Applicants have not pointed out specifically how they believe independent claims 23 and 52 distinguish over the prior art based on the claim language. Only independent claims 1 and 12 are directed to "modality dependent attributes" and "modality dependent controls".

Therefore, the rejections of claims 1 to 22 under 35 U.S.C. §112, 1<sup>st</sup> ¶, as failing to comply with the written description requirement; of claims 1 to 22 under 35 U.S.C. §112, 2<sup>nd</sup> ¶, as being indefinite for failing to particularly point out and distinctly claim the subject matter; of claims 1 to 2 and 4 to 8 under 35 U.S.C. §103(a) as being unpatentable over *Dantzig et al.* in view of *Coffman et al.*; of claims 3 and 9 to 11 under 35 U.S.C. §103(a) as being unpatentable over *Dantzig et al.* in view of *Coffman et al.*, and further in view of *Ladd et al.* ('336) of claims 12 to 46 and 52 under 35 U.S.C. §103(a) as being unpatentable over *Dantzig et al.* in view of *Ladd et al.* ('336); and of claims 47 to 51 under 35 U.S.C. §103(a) as being unpatentable over *Dantzig et al.* in view of *Ladd et al.* ('336), and further in view of *WCW Working Draft*, are proper.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARTIN LERNER whose telephone number is (571)272-7608. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Martin Lerner/  
Primary Examiner  
Art Unit 2626  
March 10, 2009